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First M.B.B.S. (2019) Supplementary Examination, (Phase II)  
Summer - 2022  
PHYSIOLOGY - I

Total Duration: Section A+B = 3 Hours

Section B Marks : 60

## SECTION - B

- Instructions:
- 1) Use blue/black ball point pen only.
  - 2) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) All questions are compulsory.
  - 4) The number to the right indicates full marks.
  - 5) Draw diagrams wherever necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
  - 7) Use a common answer book for section B.

Brief answer question (any Ten out of Eleven) :

[10 × 2 = 20]

- a) Role of diet in plasma proteins. (10)
- b) Differentiate between Action potential & Graded Potential. (6)
- c) Anticoagulants. (10)
- d) Enumerate the functions of tissue Macrophage system. (2)
- e) Deglutition Reflex. (6)
- f) Composition & Functions of pancreatic Juice. (6)
- g) Define Cardiac cycle. List its components with duration. (6)
- h) Reynold's Number.
- i) Cynosis. (10)
- j) Benefits of Yogic practices.
- k) Hering-breuer Reflex.

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# Paper

01112A

[8 × 5 = 40]

3) Short answer question (any Eight out of Nine) :

- a) Give the basis for morphological classification of anemias with characteristics features. (10)
- b) What are the Basic Electrical Rhythm (BER) in stomach? Describe the factors delaying the stomach emptying. (10)
- c) Define heart Block. Classify the heart blocks. What is Wenckebach Phenomenon? (10)
- d) Enumerate the different Blood Pressure regulating mechanisms in the body. Write briefly about Renin Angiotensin Mechanism for blood pressure regulation. (10)
- e) What is Halden effect? Describe the mechanism of CO<sub>2</sub> transport in the blood. (10)
- f) Define Haemostasis. Describe the role of platelets in haemostasis. (10)
- g) Enumerate the processes of transport of substances across the cell membrane. Write briefly about Secondary Active transport process with suitable examples. (10)
- h) Enumerate the functions of liver. What are the functions of bile salts & bile pigments? How gall bladder stones are formed? (10)
- i) A 56 years old person came to a Cardiologist's Hospital with the complaints of chest pain after fast walking, which lasts for about few minutes since last 2 to 3 weeks. After asking detail history & examination doctor took an ECG which was normal. Then doctor orders an exercise stress test which shows some ischemia. So further doctor advised patient to do Angiography. But here patient request doctor that he needs a second opinion for this. Doctor explained him that every is going correctly and patient requires an angiogram. The patient tells him that he cannot make a decision unless he talks ith his family doctor of 20 years. The Doctor offended & tells the patient that he does not any longer wishes to see the patient. Answer the following questions briefly on the scene given above.
  - i) Should the Patient behavior be seen as a threat or challenge to the doctor's authority?
  - ii) How could the doctor better explain the need for the angiography?
  - iii) How could the doctor better react to the patient's request for a second opinion from a family doctor?
  - iv) What is your opinion about 'Trust' in Doctor Patient Relationship?



4) Long answer question (any Two out of Three):

01112A  
[2 × 10 = 20]

- a) What are the characteristic features of Coronary Blood flow. How Coronary blood flow is regulated? What is Angina Pectoris? Give the correlation between Atherosclerosis & Myocardial Infarction (MI). (10)
- b) Describe the Mechanics of Breathing. What do you mean by compliance of the lungs? What is the role of surfactant? Add a note on Infant Respiratory Distress Syndrome (IRDS)? (10)
- c) What is counter current mechanism in the kidney. How kidney handles the osmolarity of urine in hot external environment? (10)

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